



# ***AMG-13***

## ***TSTCore Update***

17 July 1996



# Topics

- **Events Calendar**
- **Working Group Activities and Plans**
- **API Review**
- **Evolution of the HLA**
- **RTI Development**
- **Standards Organizations (DIS, IETF)**
- **FOM Development Tools**
- **HLA Security**
- **HLA Tech Library and the Home Page**
- **Prospective AMG dates for the two-year transition period**



# Events Calendar

- **Since last AMG meeting:**
  - 12-13 June 96      AMG-12
  - 13 June 96      I/F Spec v0.5 release
  - 28 June 96      RTI v0.33 release
- **Upcoming Events:**
  - 17-18 July 96      AMG-13
  - 21-22 August 96      AMG-14
  - 16-20 Sept 96      15th DIS Workshop
  - TBD      AMG-15 (Tentative)
  - 2-6 December 96      I/ITSEC



# HLA Baseline Development Milestones

- **AMG-13** (17-18 July)
  - Rules v1.0 (draft) review
    - ♦ draft release 9 July; comments requested by 15 July
  - OMT v1.0 (draft) review
    - ♦ draft release 9 July to OMTWG; OMTWG met 11 July
  - I/F v0.5 review
    - ♦ IFWG met 25-26 June
      - acceptable services (v1.0), ready for AMG review
      - plan for consideration of services still under discussion, primarily declaration management
  - I/F Spec Review Group meets 23-24 July
  - IFWG review of v1.0 draft by 9 August
    - ♦ draft release 14 August
- **AMG-14** (21-22 August)
  - Complete Version 1.0 final review and approval



# I/F Spec Working Group

- **Draft I/F Spec v0.5 released on 14 June 1996**
- **WG met 25-26 June 1996, reviewed comments on v0.5**
- **IF Version 1.0 Schedule**
  - **Brief AMG-13 on 17 July 1996**
  - **DMSO I/F Review Team (including SEI independent review) 23-24 July and 31 July-1 Aug 1996**
  - **Draft v1.0 to AMG by 14 August 1996**
  - **AMG-14 approve release of v1.0, 22 August 1996**
- **Only major change anticipated between v0.5 and v1.0 is Declaration Management**



# OMT Working Group

- **OMTWG-9 (19 June)**
  - Review protofederation feedback
  - Identify open issues/action items
  - Assign responsibilities
- **OMT v1.0 Draft released 9 July for review by OMTWG**
- **OMTWG-10 (11 July)**
- **AMG-13 (17-18 July)**
  - OMT v1.0 released to AMG for review
- **DMSO OMT review (including SEI independent review) 2 Aug 1996**
- **AMG-14 (21-22 Aug) approve release of v1.0**



# Test Working Group Update

- **Draft Interface Test Procedures, version 0.2, dated 4 May 1996 available on the web**
- **Draft OMT Test Procedures, version 0.1, dated 9 July 1996 available on the web**
  - Procedures for SOM and FOM testing
  - Comments/Feedback Requested
- **Next version of Interface and OMT procedures due September 5**



# API Review



- **At AMG-12, AMG agreed to**
  - Incorporate API in I/F Spec as part of baseline
  - Use IDL to represent API
  - Work to ensure API Version 1.0 is implementation independent
- **SEI is conducting independent review of I/F Spec, including API, to support review and revision of API for Version 1.0 release**
- **IFWG recommends API be presented in a separate section of the I/F Spec**
  - Automated version will allow for linkages between functional spec and API for convenience of developers
- **Evolution of API (high priority for first revision of HLA Baseline)**
  - Form an API Group
  - Identify issues and options and conduct experimentation as required to support revised API specification





# HLA Evolution: Baseline Definition

- **Result of**
  - 9 month DARPA BAA/PET process and
  - 16 month AMG review and prototyping process
    - 25+ federates, 8+ federations, range of applications
- **Baseline includes**
  - Version 1.0 of HLA Rules, Interface Specification, and Object Model Template
- **Substantially better architectural definition than typical paper review process**
  - However, this is a “baseline” definition which will mature and evolve
  - Recognized areas for further attention include
    - API
    - Time Management
    - Declaration Management



# HLA Evolution: Two Year Transition

- A two year transition period focusing on
  - Transition new and ongoing simulation programs to use HLA
  - Developing reusable infrastructure and support tools
  - *Maturing and evolving the architecture*
- Six month review and update cycles
  - HLA Version 1.0 August 96
  - HLA Version 1.1 February 97
  - HLA Version 1.2 August 97
  - HLA Version 1.3 February 98
- Evolution will be managed via the ongoing AMG process with expanded participation from programs transitioning to HLA and external professional and standards organizations
- Continued AMG working/task groups
  - OMTWG, IFWG, TMWG, DMWG, APIWG (new)
- Relationships with IEEE DIS++ organization will mature during transition period



# HLA Evolution: Working Group Tasks

- **Assess the current state of the HLA Baseline Definition**
- **Identify specific areas needing attention and key issues to be addressed**
- **Need to provide a mechanism for input from programs as they transition to HLA**
- **Develop process for identifying options for addressing issues**
  - To include prototype implementation and testing
  - IEC to serve as a focal point for HLA evolution
- **Recommend added technology investigations as required**



# RTI Development



- **RTI version 0.33x is in use; last release in the 0.X series**
  - **Prototype to support baseline definition**
  - **Provided lessons learned to RTI implementation and performance requirements**
  - **No plans for further evolution of the 0.X series**



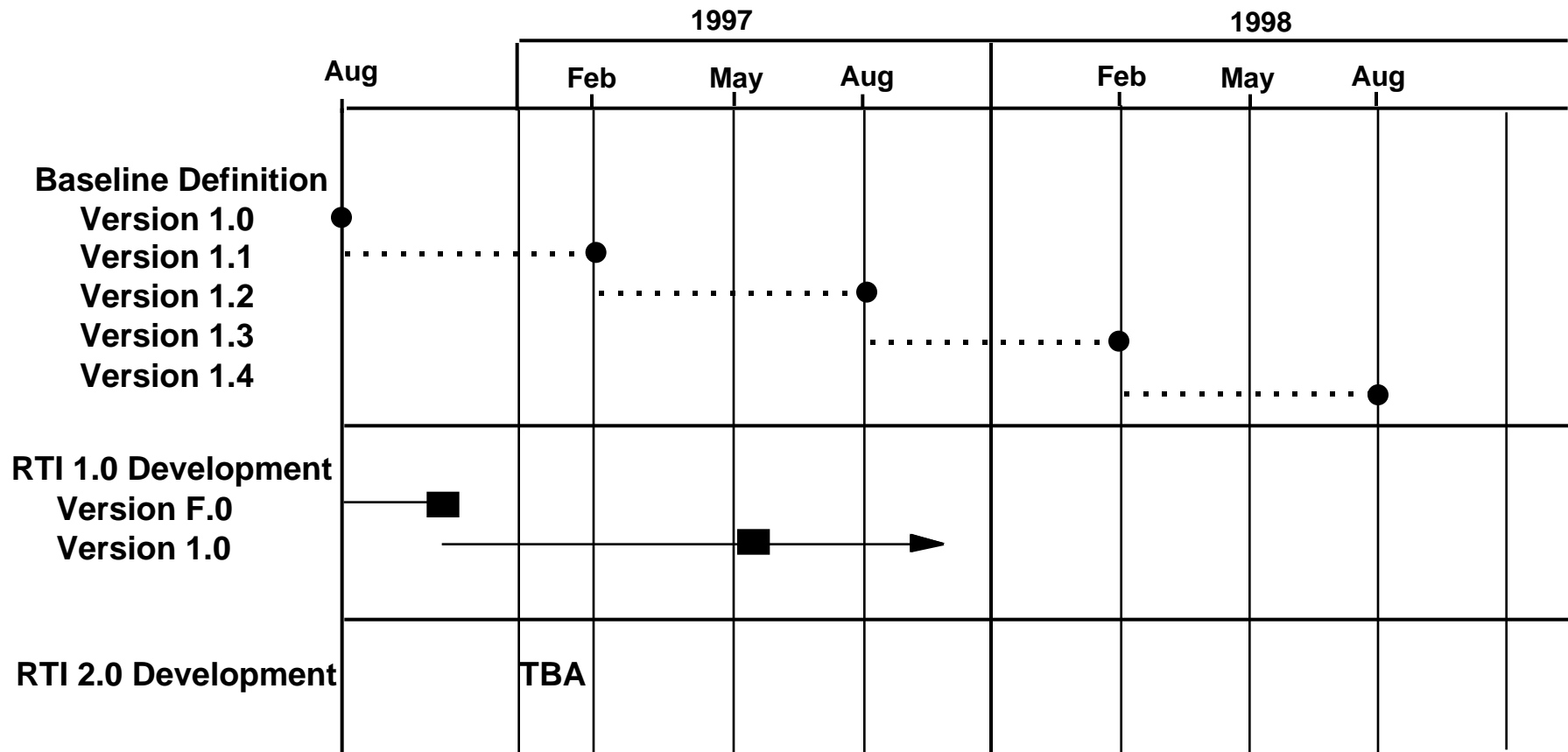
# RTI Development

**Two releases are envisioned for the RTI 1.0 Series:**

- **F.0: Familiarization (breadboard) version**
  - ♦ Targeted for Fall 96
  - ♦ Will support HLA Version 1.0 Baseline (including API v1.0)
  - ♦ Will incorporate as much functionality as possible but with limited performance
  - ♦ Will provide a working capability for initial use and a breadboard for experimentation
- **1.0: Government Shareware**
  - ♦ Targeted for Spring 97
  - ♦ Will support HLA Version 1.1 (including API v1.1)
  - ♦ Added performance



# Milestones During Two Year Transition








# DIS-15 Proposed Plans



- DIS-15 to take place 16-20 September in Orlando
- Planned sessions include a number of HLA presentations

	Mon	Tue	Wed	Thu	Fri
Morning	HLA Tech Brief	Arch Forum/ Broad Interest	DIS++ Workshop Vision	DIS WGs	Closing Session
Afternoon	Plenary	Protofed Test Brief	Conference Papers	DIS WGs	Transition Team
Evening	SIG/FG	SIG/FG	SIG/FG	open	

-  DMSO-organized Session on HLA
-  HLA-related Session
-  HLA Supporting Standards



# Internet Engineering Task Force (IETF)

- **Formed in 1986 to Standardize Protocols Used by the Internet Infrastructure**
- **Key Part of Larger Internet Structure that Includes:**
  - **Internet Engineering Steering Group (IESG)**
  - **Internet Architecture Board (IAB)**
  - **Internet Society (ISOC)**
  - **Internet Research Task Force (IRTF)**
- **All Volunteer. 1000-2000 per Meeting.**
- **Meets Three Times a Year (US, Canada, & Europe)**
- **Wide Ranging Participants. Heavily Populated with Suppliers (e.g. Router Vendors)**





# **Internet Engineering Task Force (IETF)**

## **(con't)**

- **New Working Group Formed at June Meeting in Montreal**
  - Investigate Large Area Multicast Environments
  - Driving Application is Distributed Real-Time Simulation
  - Spearheaded by DIS Communications Architecture and HLA Personnel
- **Two Products from New Group**
  - Document Describing Scenarios & Protocols for Large Scale Distributed Real-Time Simulations
  - Document Identifying Needed Internet Multicast Services to Support Large Scale Distributed Real-Time Simulations on the Internet



# FOM Development Toolset (FDT)

- **Design Reviews completed**
  - TASC (14 June)
  - AEGIS Research (2 July)
  - OMT Data Interchange Format (DIF) is most significant open issue
- **Partial on-line demonstration at AMG-14 (21-22 August)**
- **FDT Delivery (including documentation) by early October**



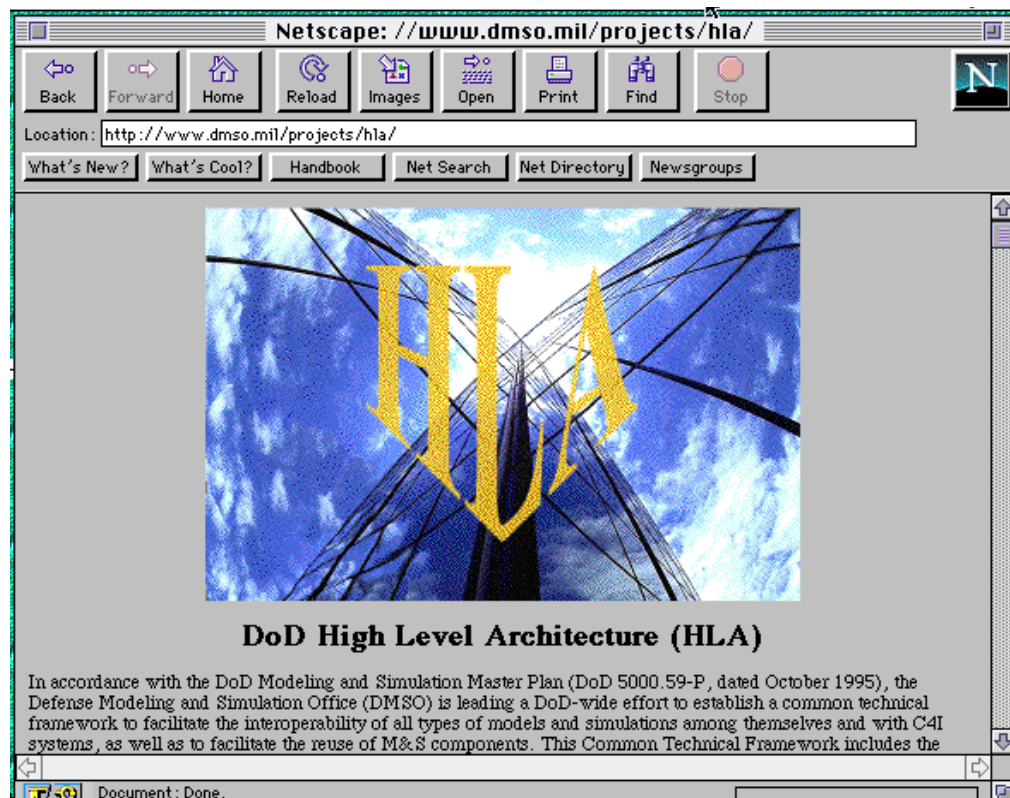
# HLA Security

- **Following AMG-12, small group review was held at DMSO to clarify aspects of emerging HLA Security Architecture**
- **As requested at AMG-12, security tech exchange will be held at end of AMG-13 Day One.**



# HLA Tech Library and the Home Page

- HLA Technical Library has been implemented as framework for the HLA home page.
- Accessible through <http://www.dmsomil/>





## Prospective AMG Dates

The following dates are postulated for continuation of the AMG meetings during the two-year HLA transition period:

<b>AMG-14</b>	<b>21-22 Aug 96 (HLA 1.0)</b>
<b>AMG-15</b>	<b>9-10 Oct 96</b>
<b>AMG-16</b>	<b>11-12 Dec 96</b>
<b>AMG-17</b>	<b>12-13 Feb 97 (HLA 1.1)</b>
<b>AMG-18</b>	<b>9-10 Apr 97</b>
<b>AMG-19</b>	<b>12-13 Jun 97</b>
<b>AMG-20</b>	<b>13-14 Aug 97 (HLA 1.2)</b>
<b>AMG-21</b>	<b>8-9 Oct 97</b>
<b>AMG-22</b>	<b>10-11 Dec 97</b>
<b>AMG-23</b>	<b>11-12 Feb 98 (HLA 1.3)</b>
<b>AMG-24</b>	<b>8-9 Apr 98</b>
<b>AMG-25</b>	<b>10-11 Jun 98</b>
<b>AMG-26</b>	<b>13-14 Aug 98 (HLA 1.4)</b>